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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,655	07/02/2003	Marshall Thomas DePuc	10030189-1	5451
57299	7590	01/12/2006	EXAMINER	
AVAGO TECHNOLOGIES, INC. P.O. BOX 1920 DENVER, CO 80201-1920			BODDIE, WILLIAM	
		ART UNIT	PAPER NUMBER	
		2674		
DATE MAILED: 01/12/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/612,655	DEPUE ET AL.
	Examiner William Boddie	Art Unit 2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 December 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

In a communication dated, December 5, 2005, applicant presented arguments against the rejections of claims 1-20. As such claims 1-20 are currently pending.

Response to Arguments

Applicant's arguments filed on December 5th, 2005 have been fully considered but they are not persuasive.

In section I.A applicant argues that all of the features of claim 1, are not taught by the proposed combination. Koripella teaches coupling a micro fuel cell to a rechargeable battery and to a portable electronic device. Derocher provides power for an optical position tracking system and a transmitter via a rechargeable battery, solely. Supplementing Derocher's rechargeable battery power with a micro fuel cell, as taught by Koripella, would clearly cause the micro fuel cell to provide power to the optical position tracking system and transmitter of Derocher.

In section I.B applicant argues that by combining Derocher and Koripella would change the principle operation of Derocher. On the contrary, Koripella teaches the inclusion of a rechargeable battery. Koripella simply supplements the rechargeable battery power with the power from a micro fuel cell. Koripella's rechargeable battery is still capable of being recharged. Therefore, Derocher's rechargeable mouse would still be able to operate as prescribed, just as Koripella's portable electronic device, cell phone for example, is still functional with the addition of a micro fuel cell.

In section I.C-E applicant argues there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, extending the battery life of the rechargeable battery, and thus decreasing the frequency that the mouse must be recharged is knowledge generally available to one of ordinary skill in the art.

In section I.F applicant argues that the examiner's conclusion of obviousness is based upon improper hindsight reasoning. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that Derocher and Koripella are nonanalogous art (sec. I.G), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

In this case, both Derocher and Koripella are directed to the applicant's current problem of effectively and efficiently supplying rechargeable power to wireless portable devices. While Koripella solves this problem by jointly a micro fuel cell and a rechargeable battery and Derocher focuses solely on a rechargeable battery, the end goal is identical, to provide a rechargeable and long lasting power supply to a wireless portable device.

In section I.I applicant argues that claims 2-9, 12, and 14-20, are allowable due to the lack of a proper rejection of claim 1, and similarly featured independent claim 14. As shown above the rejection of claims 1 and 14 are proper, and as such their dependent claim rejections are renewed.

In section II.A applicant argues that claim 10 is allowable as it depends on claim 1. As shown above the rejection of claim 1 is proper, and as such claim 10's rejection is renewed.

In section II.B applicant argues that Derocher, Koripella and Hirsch are not analogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Derocher, Koripella and Hirsch are directed to solving the problem of effectively and efficiently supplying rechargeable power to portable devices. While Koripella and Hirsch solve this problem by jointly a micro fuel cell and a rechargeable battery and Derocher focuses solely on a rechargeable battery, the end

goal is identical, to provide a rechargeable and long lasting power supply to a wireless portable device.

In section III.A applicant argues that claim 11 is allowable as it depends on claim

1. As shown above the rejection of claim 1 is proper, and as such claim 11's rejection is renewed.

In section III.B applicant argues that Derocher, Koripella and Peng are not analogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Derocher, Koripella and Peng are directed to solving the problem of effectively and efficiently supplying rechargeable power to portable devices. While Koripella solves this problem by jointly a micro fuel cell and a rechargeable battery; Derocher focuses solely on a rechargeable battery and Peng focuses on generating power within the mouse, the end goal is identical, to provide a rechargeable and long lasting power supply to a wireless portable device.

In section IV.A applicant argues that claim 13 is allowable as it depends on claim

1. As shown above the rejection of claim 1 is proper, and as such claim 13's rejection is renewed.

In section IV.B applicant argues that Derocher, Koripella and Freathy are not analogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem

with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Derocher, Koripella and Freathy are directed to solving the problem of effectively and efficiently supplying rechargeable power to portable devices. While Koripella solves this problem by jointly a micro fuel cell and a rechargeable battery; Derocher focuses solely on a rechargeable battery and Peng focuses on generating power within the mouse, the end goal is identical, to provide a rechargeable and long lasting power supply to a wireless portable device.

Also note the new rejection of claim 13 as obvious over Derocher in view of Koripella, shown below.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Derocher et al. (US 6,476,795) in view of Koripella et al. (US 6,387,559).

With respect to claim 1, Derocher discloses, a wireless optical navigation device (fig. 2) comprising: an optical position tracking system (col. 3, lines 40-43); a transmitter electrically coupled to said optical position tracking system (52 in fig. 2).

Derocher does not expressly disclose a micro fuel cell electrically coupled to said transmitter and said optical position tracking system, said micro fuel cell capable of providing electrical power for said optical position tracking system and said transmitter.

Koripella discloses a micro fuel cell (fig. 3) electrically capable of providing electrical power (col. 6, lines 1-4).

Derocher and Koripella are analogous art because they are directed at a similar problem solving area, namely powering handheld electronic devices (Koripella, 60 in fig. 3).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the portable device fuel cell taught by Koripella on the wireless optical mouse disclosed by Derocher.

The motivation for doing so would have been to lengthen the battery life of the device and thus decrease the frequency that the battery needs to be recharged.

Therefore it would have been obvious to combine Koripella with Derocher for the benefit of longer battery life to obtain the invention as specified in claim 1.

With respect to claim 2, Derocher discloses, wherein said transmitter is an infrared type transmitter (col. 3, lines 15-18).

With respect to claim 3, Koripella discloses wherein said micro fuel cell is a direct methanol micro fuel cell (col. 1, lines 5-10).

With respect to claim 4, Koripella discloses wherein said micro fuel cell is a water recycling micro fuel cell (col. 4, lines 12-15).

With respect to claim 5, Korpella discloses wherein said micro fuel cell comprises a MEMS pump (40 in fig. 3).

With respect to claim 6, Korpella discloses wherein said micro fuel cell comprises microchannel structures for waste gas removal (col. 6, lines 6-9 and 44 in fig. 3).

With respect to claim 7, Korpella discloses wherein said micro fuel cell comprises microchannel structures for water recovery (col. 2, lines 23-25 and col. 4, lines 3-8).

With respect to claim 8, Korpella discloses the apparatus further comprising a replaceable fuel cartridge (35 in fig. 1 and col. 4, lines 14-18).

With respect to claim 9, Korpella discloses wherein said replaceable fuel cartridge contains methanol (col. 4, lines 14-18).

With respect to claim 12, Korpella discloses the apparatus further comprising a rechargeable battery that is electrically coupled to said micro fuel cell and said optical position tracking system (64 in fig. 3).

With respect to claim 13, Derocher and Korpella disclose the apparatus of claim 12 (see above).

Derocher further discloses that the rechargeable battery is preferably a lithium ion type battery (col. 3, lines 50-53), a type that would include polymer lithium batteries.

Derocher and Korpella do not expressly disclose, wherein said battery is specifically a polymer lithium battery.

It would have been obvious to one of ordinary skill in the art to use a polymer lithium battery as the type of lithium ion type battery taught by Derocher.

The motivation for doing so would have been that polymer lithium batteries are typically lighter than other batteries and also allow for specific shaping of the battery to a desired form.

Therefore it would have been obvious to combine Derocher and Koripella for the reasons given above to obtain the invention as specified in claim 13.

With respect to claim 14-20, the method for making a device of claim 1 is inherent. Therefore claim 14 and all of its identical dependent claims (claims 16-20) are rejected on the same merits as shown above.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Derocher in view of Koripella as applied to claim 8 above, and further in view of Hirsch et al. (US 6,924,055).

Derocher and Koripella do not expressly disclose, wherein said replaceable fuel cartridge includes a fuel membrane.

Hirsch discloses wherein said replaceable fuel cartridge includes a fuel membrane (50 in fig. 2, and col. 6, last paragraph).

Derocher, Koripella, and Hirsh are all analogous art because they are directed to a similar problem solving area, namely powering portable devices.

At the time of the invention it would have been obvious to include the fuel cell powered mouse taught by Derocher and Koripella with a membrane in the fuel cartridge.

The motivation for doing so would have been in order to encourage flow into the anode chamber and to limit backflow of fuel from the anode chamber to the fuel delivery cartridge (Hirsch, col. 6, lines 50-56).

Therefore it would have been obvious to combine Hirsch with Derocher and Koripella for the benefit of encouraging flow and limiting backflow to obtain the invention as specified in claim 10.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Derocher in view of Koripella as applied to claim 1 above, and further in view of Peng (US 6,686,903).

Derocher and Koripella do not expressly disclose, an apparatus further comprising a capacitor that is electrically coupled to said micro fuel cell and said optical position tracking system.

Peng discloses, an apparatus further comprising a capacitor that is electrically coupled to said micro fuel cell and said optical position tracking system (209 in fig. 2).

Derocher, Koripella, and Peng are all analogous art because they are directed to a similar problem solving area, namely powering wireless handheld devices.

At the time of the invention it would have been obvious to include a capacitor in the circuitry of the fuel cell powered mouse taught by Derocher and Koripella.

The motivation for doing so would have been to regulate the output voltage (Peng, col. 3, lines 43-45).

Therefore, it would have been obvious to combine Peng with Koripella and Derocher for the benefit of regulating the voltage to obtain the invention as specified in claim 11.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Derocher in view of Koripella as applied to claim 1 above, and further in view of Freathy et al. (US 6,774,797).

Derocher further discloses that the rechargeable battery is preferably a lithium ion type battery, a type that would include polymer lithium batteries.

Derocher and Koripella do not expressly disclose, wherein said battery is specifically a polymer lithium battery.

It would have been obvious to one of ordinary skill in the art to use a polymer lithium battery as the type of lithium ion type battery taught by Derocher.

Freathy discloses, the specific use of a polymer lithium battery. (col. 4, lines 41-43).

Derocher, Koripella, and Freathy are all analogous art because they are directed to a similar problem solving area, namely powering portable wireless devices.

At the time of the invention it would have been obvious to use a polymer lithium battery as the rechargeable battery type.

The motivation for doing so would have been that polymer lithium batteries are typically lighter than other batteries and also allow for specific shaping of the battery to a desired form.

Therefore, it would have been obvious to combine Freathy with Koripella and Derocher for the benefit of less weight to obtain the invention as specified in claim 13.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Will Boddie whose telephone number is (571) 272-0666. The examiner can normally be reached on Monday through Friday, 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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12/15/05



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